

Title (en)

PRODUCTION METHOD FOR HIGH PURITY COPPER POWDER USING A THERMAL PLASMA

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES HOCHREINEN KUPFERPULVERS MITHILFE EINES WÄRMEPLASMAS

Title (fr)

PROCÉDÉ DE PRODUCTION DE CUIVRE EN POUDRE À HAUT DEGRÉ DE PURETÉ À L'AIDE D'UN PLASMA THERMIQUE

Publication

EP 2511032 A4 20131030 (EN)

Application

EP 10836122 A 20100720

Priority

- KR 20090120452 A 20091207
- KR 2010004734 W 20100720

Abstract (en)

[origin: WO2011071225A1] The present invention relates to a production method for a high purity copper (Cu) powder material used, by way of example, in penetrator liners and the production of sputtering targets in the electronics industry. As regards the way in which it is consequently configured, the present invention comprises a method for producing a metal powder by using a device having a starting-material supply unit, a plasma torch unit and a reaction vessel, wherein high purity copper powder with a mean particle size of from 5 to 300 µm is obtained by making a copper (Cu) powder having a mean particle size of from 30 to 450 µm pass via a thermal plasma torch at an injection rate of from 2 to 30 kg/hr.

IPC 8 full level

B22F 9/14 (2006.01); **B22F 1/065** (2022.01); **B22F 9/04** (2006.01); **C22B 9/22** (2006.01)

CPC (source: EP KR US)

B22F 1/065 (2022.01 - EP KR US); **B22F 9/04** (2013.01 - KR); **B22F 9/12** (2013.01 - EP US); **B22F 9/14** (2013.01 - KR);
C23C 14/3414 (2013.01 - EP US); **B22F 2998/10** (2013.01 - EP US); **B22F 2999/00** (2013.01 - EP US)

Citation (search report)

- [I] GB 1390352 A 19750409 - TETRONICS RESEARCH DEV CO LTD
- [A] US 6379419 B1 20020430 - CELIK CESUR [CA], et al
- [I] BOULOS M: "Plasma power can make better powders", METAL POWDER REPORT, MPR PUBLISHING SERVICES, SHREWSBURY, GB, vol. 59, no. 5, 1 May 2004 (2004-05-01), pages 16 - 21, XP004508833, ISSN: 0026-0657, DOI: 10.1016/S0026-0657(04)00153-5
- See references of WO 2011071225A1

Cited by

CN110039062A

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)

WO 2011071225 A1 20110616; CN 102665972 A 20120912; CN 102665972 B 20150923; EP 2511032 A1 20121017; EP 2511032 A4 20131030;
JP 2013513032 A 20130418; JP 5746207 B2 20150708; KR 101134501 B1 20120413; KR 20110064036 A 20110615;
US 2012240726 A1 20120927; US 9061353 B2 20150623

DOCDB simple family (application)

KR 2010004734 W 20100720; CN 201080055710 A 20100720; EP 10836122 A 20100720; JP 2012543006 A 20100720;
KR 20090120452 A 20091207; US 201013513712 A 20100720